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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

LEO, LEONARD R

ART UNIT PAPER NUMBER

3753

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/748,636

Applicant(s)

FAKHERI, AHMAD

Examiner

Leonard R. Leo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 4,9,10,13-19,21,24,25 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-8,11,12,20,22,23,26 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed on January 12, 2006 has been entered. Claims 1-28 are pending, and claims 4, 9-10, 13-19, 21, 24-25 and 27 remain withdrawn from further consideration.

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are blurry and shaded. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 8, 11-12, 20, 22 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson et al. Regarding claim 2, Figure 2 of Nelson et al discloses the tube 11 has a circular cross section. Regarding claims 3 and 5, Figure 1 of Nelson et al discloses fin segments 21, 22 spaced apart at regular intervals. Regarding claim 8, Figure 3 of Nelson et al discloses a rectangular loop. Regarding claims 11-12, 22 and 26, Figure 2 of Nelson et al discloses fin segments 21, 22 have a plurality of holes corresponding to the number of loops.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al in view of Ares.

Nelson et al discloses all the claimed limitations except a blower within the core.

Ares discloses a heat exchanger comprising a core 16a, 16b having regularly spaced apart fin segments 20a, 20b and blower 44 disposed within the core for the purpose of increasing airflow to improve heat exchange.

Since Nelson et al and Ares are both from the same field of endeavor and/or analogous art, the purpose disclosed by Ares would have been recognized in the pertinent art of Nelson et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Nelson et al a blower disposed within the core for the purpose of increasing airflow to improve heat exchange as recognized by Ares.

Claims 7 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al in view of Dailey.

The device of Nelson et al lacks a blower around the core.

Dailey discloses a heat exchanger comprising a core 62 and blower 50 disposed around the core for the purpose of increasing airflow to improve heat exchange.

Since Nelson et al and Dailey are both from the same field of endeavor and/or analogous art, the purpose disclosed by Dailey would have been recognized in the pertinent art of Nelson et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Nelson et al a blower disposed around the core for the purpose of increasing airflow to improve heat exchange as recognized by Dailey.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

Counsel is attempting, impermissibly, in his remarks to nullify the expansive definition of "helicoidal" established in applicant's own specification. In the brief description of the drawings, Figure 7 is disclosed all coil shapes 70A, 70B and 70C to constitute "helicoidal heat exchangers." The Examiner relied upon applicant's expansive definition of the term "helicoidal" and found a reference that has an identical tube structure to that illustrated in applicant's Figure 7 (helicoidal tube 70A). Counsel's attempts to give the term "helicoidal" a narrower meaning than the specification are unavailing.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3753

March 24, 2006